



4. What are the advantages of structured programming?

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5. The following pseudocode program is designed to allow the user to input a series of three numbers and for each set of numbers, find and output the maximum. The maximum is then added to a total. When the user enters 0 for each of the three numbers, the average of all the maximums is calculated and output.

```

SUB initialise
    OUTPUT "This program finds the maximums of sets of three numbers.
        Enter three zeroes when all numbers entered.
        Program then calculates and outputs the average of the maximums"
    total = 0
    n = 0
ENDSUB

SUB promptForNumbers
    OUTPUT "Please enter first number "
    num1 = USERINPUT
    OUTPUT ("Please enter second number "
    num2 = USERINPUT
    OUTPUT "Please enter third number "
    num3 = USERINPUT
ENDSUB

SUB findMax
    maxnum = num1
    IF num2 > maxnum THEN
        maxnum = num2
    ELSE
        IF num3 > maxnum THEN
            maxnum = num3
        ENDIF
    ENDIF
    OUTPUT "Max of the three numbers is is ", maxnum
ENDSUB

SUB performCalculations
    total = total + maxnum
    n = n + 1
ENDSUB

SUB processData
    promptForNumbers
    WHILE num1 <> 0 and num2 <> 0 and num3 <> 0
        findMax
        performCalculations
        promptForNumbers
    ENDWHILE
ENDSUB

SUB calculateAverage
    average = total / n
    OUTPUT "Average of maximums is ", average
ENDSUB

#Main program starts here
initialise
processData
    
```

Worksheet 3: Thinking procedurally

Unit 10 Computational thinking



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calculateAverage

Draw a hierarchy chart representing this program. Show the different levels, i.e. Level 1 modules, Level 2 modules etc.